

most accessible healthcare professional. Pharmacists might provide support in optimizing therapeutic regimens, monitoring therapeutic progress, and addressing drug-related problems.

Purpose: The objective is to analyze the attitudes of patients and practicing pharmacists regarding the implementation of clinical pharmacy services in the care of patients with rheumatoid arthritis (RA) in Bulgaria.

Method: A cross-sectional online survey was conducted among practicing pharmacists across the country and RA patients being monitored at the University Hospital “Ivan Rilski” in Sofia, Bulgaria between June 2024 and September 2024. The survey aimed to assess their attitudes towards the provision of pharmaceutical care services (PCS). Data were processed using the specialized statistical software MedCalc v. 23.0.5, applying the following analyses: point and interval estimation, frequency and graphical analysis, and hypothesis testing for the studied variables.

Findings: As patient age increased [n=100, average age 53.34 years, 95% CI 50.00–55.00], the number of respondents who answered positively that the pharmacist provides necessary medication information also increased (p=0.0494). A statistically significant majority of patients (57%) reported they would not pay for PCS, and 48% never consult a pharmacist (p < 0.0001). Among the 53 pharmacists surveyed, a statistically significant majority (87%, p<0.0001) had not received additional training on RA, with most agreeing that a service fee for PCS should match that charged by the attending physician (1.45 euro) (42%, p<0.0001). Bulgarian pharmacists identified the benefits of PCS for RA (such as increased trust in pharmacists (88.68%) and improved quality of life (83.02%)), while also highlighting considerable obstacles, including lack of time (81.13%) and financial incentives (52.83%).

Conclusion: Efforts are needed not only to ensure adequate regulatory and financial access to RA treatment in Bulgaria but also to establish the active role of pharmacists in patient care to achieve desired outcomes.

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The role of the pharmacist in the treatment of patients with multiple sclerosis

Todor Georgiev¹, Mariya Kamusheva^{1,*}, Valentina Petkova¹, Yoana Seitaridou¹
¹ Faculty of Pharmacy, Medical University of Sofia, Bulgaria

* Corresponding author:

E-mail address: mkamusheva@pharmfac.mu-sofia.bg (M. Kamusheva).

Background: Multiple sclerosis (MS) is a chronic neurological disease that leads to progressive disability, impairing the quality of life for patients and their families. Optimizing drug therapy and preventing drug related problems, with the active role of the pharmacist, can reduce the frequency of hospitalizations and the need for additional medical interventions, resulting in lower healthcare system costs.

Purpose: To evaluate the role of pharmacists in the treatment of patients with MS, with a focus on their integration into the multidisciplinary team.

Method: A four-step analysis was conducted: (1) a systematic review of scientific literature to assess the pharmacist's role; (2) a cross-sectional survey among 63 MS-diagnosed patients receiving care at the Neurology Clinic of University Hospital “Alexandrovska” in Sofia to assess their attitudes toward pharmaceutical care (PC); (3) a SWOT analysis to identify marketing opportunities for implementing pharmaceutical care for MS in Bulgaria; and (4) development of a pharmacist protocol to identify and prevent drug-related problems (DRPs) among MS patients. Survey results were analyzed using the Statistical Package for the Social Sciences (SPSS) and Microsoft Excel.

Findings: The systematic review identified 11 relevant studies indicating that including pharmacists in multidisciplinary teams improves adherence to therapy and reduces DRPs. The majority (75%) of patients consider pharmacist involvement important, but the percentage of patients consulting pharmacists (27%) and those willing to pay for PC (38.8%) remains low (p<0.05). The SWOT analysis confirms the potential for developing PC in Bulgaria, emphasizing economic benefits but also highlighting the need for further training and awareness in this area.

Conclusion: Integrating pharmacists into MS treatment is associated with improved patient quality of life, economic benefits, and optimized medication therapy. Additional measures and policies at the national level are needed to establish pharmacists as key members of the multidisciplinary team in the care of MS patients.

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Vitamin D Screening in Pharmacies: Insights from a Federal Campaign and Prospects for Professional Advancements

Olaf Rose^{1,*}, Johanna Pachmayr¹, Stefanie Eppacher¹, Stephanie Clemens¹
¹ Paracelsus Medical University

* Corresponding author:

E-mail address: olaf.rose@pmu.ac.at (O. Rose).

Background: Pharmacies are ideal settings for health screening due to their accessibility and convenience. Increasing concern over vitamin D deficiency, especially in winter months in northern and mid-latitudes, underscores the importance of accessible screening options.

Purpose: This study evaluated vitamin D levels in early spring and examined the viability of a large-scale vitamin D screening initiative in pharmacies.

Methods: The research was a cross-sectional, multicenter survey integrated into routine pharmacy care in the State of Salzburg. Data was collected anonymously, utilizing a fluorescent immunoassay for point-of-care-testing. Additionally, separate questionnaires were designed for patients and providers. Descriptive statistics were used to analyze quantitative data, with parametric and nonparametric tests applied to ensure comprehensive analysis. A maturity matrix was developed to assess the potential for broad implementation.

Findings: During a two-week campaign, 62 pharmacies performed 2,770 vitamin D tests. Patients found out about the campaign mainly by advertisement in the pharmacies. Every participant completed the questionnaire, and 45 pharmacists took part in a follow-up survey. About half of the patients had never tested their vitamin D level before. Results showed that 56.2% of participants had vitamin D deficiency, and 25.2% had insufficient levels. Higher BMI was linked to lower vitamin D levels, while daily supplementation was associated with higher levels than intermittent dosing. Patient satisfaction was high, and pharmacists appreciated the positive patient feedback, expressing interest in expanding testing. Most pharmacists supported a professional change towards more clinical pharmacy services in the future. The maturity matrix developed in this study could support corporate adoption of similar screening efforts.

Conclusion: This large-scale federal vitamin D screening in pharmacies was successful, with both patients and pharmacists reporting high satisfaction. It extended this otherwise underutilized medical service to patients who typically lack access to it. The study revealed widespread vitamin D deficiency among participants, reinforcing the potential value of regular pharmacy-based screening. Pharmacists showed enthusiasm for further expanding clinical services to support patient health in new ways.

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Using a mixed-mode method to assess the effects of a structured counseling approach on pharmacy students' communication self-efficacy and skills

Yunn-Fang Ho^{1,*}, Yen-Ming Huang², Hsun-Yu Chan³, Ling-Ling Hsieh⁴, Ling-Jie Chen⁵

¹ Graduate Institute of Clinical Pharmacy, College of Medicine, National Taiwan University; ² National Taiwan University; ³ National Taiwan Normal University; ⁴ School of Pharmacy, College of Medicine, National Taiwan University; ⁵ Chen-Fang Pharmacy, Yilan County, Taiwan

* Corresponding author:

E-mail address: yfho@ntu.edu.tw (Y.-F. Ho).

Background: Standardized instructional methods in pharmacy education are vital for ensuring high-quality teaching and accountability. To support students' counseling skills for over-the-counter (OTC) medications, we introduced a 5-step structured counseling approach to guide their practice.

Purpose: This study involved senior pharmacy students applying structured approach to counseling on OTC medications during advanced experiential training. Through a mixed-mode assessment technique, we sought to evaluate the impact of this approach on the students' self-efficacy and counseling skills for

OTC medications.

Method/study design: The structured counseling approach (SAIDS) consisted of five elements: (1) Surfacing symptoms and medication history, (2) Inquiring about allergies, (3) Providing medication indication, (4) Directing correct medication use, and (5) Supporting self-care. During six-week Advanced Community Pharmacy Practice Experiences (ACPPEs), students offered conventional OTC counseling in the first three weeks, followed by the SAIDS approach in the last three weeks. Consumer participants were recruited from six community pharmacies in Taiwan between 2020 and 2022. Self-administered questionnaires were used to assess consumers' understanding of OTC use and to evaluate students' self-efficacy and skills in OTC counseling.

Findings: A total of 31 pharmacy students participated in the ACPPEs, documenting 292 OTC counseling sessions. Of these, 128 customers received conventional counseling, while 159 received SAIDS counseling. Consumers who received SAIDS medication counseling demonstrated a significantly better understanding of the cautions associated with the OTC products they purchased ($p < 0.001$). Pharmacy students reported a significant increase in self-efficacy ($p < 0.001$) in OTC counseling over the 6-week ACPPE period. They noted that the ACPPE offered valuable opportunities to practice medication counseling independently. In qualitative feedback, students highlighted that the SAIDS method helped them asked insightful questions to assess consumers' needs, recommended appropriate OTC products, and provided crucial counseling information. They also noted that SAIDS fostered empathy for consumers' discomfort, promoted shared decision-making, ensured completeness of the counseling process, and empowered consumers to manage their own medication. Additionally, students observed that consumers often had difficulty reconciling conflicting information from various sources or lacked a clear understanding of their conditions. The SAIDS approach enabled students to have meaningful conversations that helped clarify essential aspects of OTC product use.

Conclusion: Pharmacy students reported increased self-efficacy in OTC counseling and a better understanding of OTC use among consumers when using the structured SAIDS approach. This structured counseling method proves effectiveness in enhancing students' communication skills, enabling them to support the public in using OTCs safely and effectively.

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Empowering Community Pharmacists for Next-Generation Therapeutics: Assessing Knowledge Needs and Implementing Educational Solutions

Marios Spanakis^{1,2,3,*}, Sofia Papadimitriou⁴, Aristotelis Skountakis², Maria Vamvakaki⁵, Ioannis Charalampopoulos^{6,7}, Achilleas Gravanis^{6,7}

¹ Department of Forensic Sciences & Toxicology, School of Medicine, University of Crete, GR-71003 Heraklion, Greece; ² Community Pharmacists Association of Heraklion, GR-71201, Greece; ³ Computational Biomedicine Laboratory, Institute of Computer Science, Foundation for Research & Technology Hellas (FORTH), GR-70013 Heraklion, Greece; ⁴ Prolepsis Institute of Preventive Medicine Environmental and Occupational Health, GR-15125, Athens, Greece; ⁵ Department of Materials Science and Engineering, University of Crete, GR-70013 Heraklion, Greece; ⁶ Department of Pharmacology, School of Medicine, University of Crete, Heraklion, GR-71003, Greece; ⁷ Institute of Molecular Biology and Biotechnology, Foundation for Research & Technology Hellas (FORTH), GR-70013, Heraklion, Greece

* Corresponding author:

E-mail address: mspanakis@uoc.gr (M. Spanakis).

Background: Next-generation therapeutics (NGTs) transform healthcare with innovations like precision medicine, biologics, gene therapies, nanomedicines, eHealth solutions and artificial intelligence. In this new healthcare ecosystem, community pharmacists (CPs) can play a pivotal role. However, CPs face challenges such as knowledge gaps, limited training, and insufficient collaboration with other healthcare professionals. These obstacles highlight the need for continuous education to assist CPs integrate NGTs into everyday practice.

Purpose: To assess CPs' expertise with NGTs and explore the challenges and the educational needs they face in incorporating these innovations into their practice. Based on the findings, an educational program was designed and is currently implemented.

Method/Study Design: A pilot study was conducted through a questionnaire among CPs. Data were gathered on their knowledge, familiarity awareness and

their views on the pharmacist's role as to NGTs. Demographic data and years of working experience were collected for context.

Findings: The questionnaire was completed from 35 CPs. The majority were aged 30–45, (71.4%) holding graduate-level degrees (68.6%) with 10–20 years of working experience. CPs 51.4% reported little familiarity with NGT, with 40% rarely aware of patients undergoing such treatments. Key challenges included limited time for training (77.1%) and access to educational material (51.4%), leaving 45.7% of them feeling unprepared for patient care as to NGTs. CPs reported infrequent collaboration with healthcare professionals (51.4%) and rarely empowering patients on novel therapies (57.1%). Identified obstacles were workload (71.4%) and lack of training (68.6%). CPs (65.7%) saw their role in managing novel treatments as essential, with most wanting training on eHealth and AI tools (65.7%) and biotechnological products (62.9%). Key resources were educational programs (91.4%), clinical guidelines, and expert collaboration (62.9% each).

To address these challenges, the Community Pharmacist Association of Heraklion, in collaboration with the School of Medicine and the Center for Training and Lifelong Learning of the University of Crete, established a 100-hour online training course entitled "Advanced Training in Pharmaceutical Sciences and Community Pharmacy." The first course was completed by 30 CPs. All participants reported updating their knowledge, finding the program effectively covered NGTs (60.0%), especially for biotechnological medicines (83.3%). They plan to use their knowledge for patient empowerment and for personalized care (80%). All would recommend the program for CPs.

Conclusion: The pharmacy landscape is evolving, and it is crucial to enhance CPs' literacy in managing NGT. Thus, it is important to identify the CPs' needs in order to apply efficient educational strategies.

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A potential impact of mindfulness intervention on emotional intelligence in postgraduate pharmacists

Dejan Senčanski^{1,*}, Valentina Marinković², Ivana Tadić³

¹ LNS Serbia; ² University of Belgrade, Faculty of Pharmacy; ³ Innsbruck University, Department of Clinical Pharmacy, Austria

* Corresponding author:

E-mail address: dejan.sencanski@lns.rs (D. Senčanski).

Background: Emotional intelligence (EI) is an essential skill set for pharmacists, as it represents a type of social intelligence which encompasses the abilities to recognise, perceive and manage one's own emotions and those of others to guide the thought process better, handle challenges, increase motivation and improve overall well-being. Mindfulness interventions have been used and proven to increase EI levels, particularly emotional self-awareness and emotion regulation. Growing evidence shows that mindfulness practice may positively influence EI levels in different healthcare professionals. However, this phenomenon has not been studied in practising pharmacists.

Purpose: To test the potential impact of mindfulness intervention on EI levels in postgraduate pharmacists and to correlate EI and perceived stress levels before and after the intervention.

Method: The interventional study with a pretest-posttest design was employed. Pharmacy postgraduates specialising at the Faculty of Pharmacy, University of Belgrade, were purposefully sampled to take part in the study conducted between November 2021 and June 2022. The intervention included two 90-minute sessions focusing on mindfulness meditation ("focussed attention and open monitoring"), journaling, intention-setting, and gratitude practices. Validated instruments, such as the Genos Emotional Intelligence Inventory Concise Version and the Perceived Stress Scale, were distributed electronically to all participating pharmacists before and after the intervention. Appropriate descriptive and correlation statistics tests were used to analyse the data.

Findings: Of 44 invited postgraduate pharmacists, 35 participated, and data from 28 pharmacists satisfying the inclusion criteria were analysed. The mean EI levels before the intervention were 115.32 ± 11.98 and did not increase significantly after the intervention ($t = -1.323$, $p = 0.197$, $d = -0.250$). However, there was a significant increase in the Emotional Self-Control EI subdomain levels ($Z = -3.005$, $p = 0.003$, $r = -0.402$). The subanalysis revealed that the highest impact of the intervention on the mean EI levels change was in the clinical pharmacists and other pharmacists' subgroups (5.1 ± 6.6 and 5.5 ± 6.2 , respectively). Increased